

### REMARKS

In the amendments above, claims 1, 12, 30, and 45 have been currently amended, to more particularly point out and distinctly claim Applicants' invention. Applicants note that the amendment at least to claims 1 and 12 are purely cosmetic in nature and that the amendments to claim 30 and 45 remove a change made in a previous amendment.

The amendments to claim 1 and 12 were not made previously, since the informalities corrected were only noted in the preparation for this response. The need for the amendments to claims 30 and 45 became clear only after the enclosed declaration was reviewed. The declaration itself is in response to the final rejection, and thus could not be made earlier.

Claims 30 and 45, although presently withdrawn, have been amended to be consistent with the other presently pending claims, since the method claims could, and should, be allowed upon the allowance of other claims herein. Also, method claims 30 and 45 each set forth a step where the polymer material may comprise amine terminated polyamide or amino propyl triethoxy silane. Applicants point out that whereas the reaction products of amino propyl triethoxy silane are mentioned in, for example, claim 1, the reaction products are not mentioned in the respective steps of claims 30 and 45 since the reaction products that form will form mainly during or subsequent to the respective acts.

Claims 1-3, 7-12, 14-20, 22-29, 32, and 42 have been rejected under 35 U.S.C. §112, first and second paragraphs. The Examiner maintains that the terminology "the reaction products of amino propyl triethoxy silane" is problematic for the following reasons:

1. The subject matter of the terminology was not described in the specification in such a way to reasonably convey to one skilled in the art that the Applicants had possession of the invention;

2. The specification does not enable one skilled in the art to make and/or use the subject matter of the terminology; and
3. The terminology is indefinite.

Applicants respectfully traverse the above rejections.

Claim 1, as amended above, is directed to a substrate comprising an underlayer coating comprising a polymer material selected from the group "consisting of ... amino propyl triethoxy silane, and reaction products of amino terminal triethoxy silane..." As one skilled in the art would appreciate, amino propyl triethoxy silane ("APTS") is a highly active and reactive compound, as is reflected, for example, in an article entitled, "Tailoring Surfaces With Silanes," from A Survey of Properties and Chemistry, edited by B. Ackley, Gelest, Inc., 1995, pps. 36-37, a copy of which is attached hereto. One skilled in the art would also appreciate that APTS would react with water or other components, or even water in a humid environment, to form reaction products.

More specifically, the outerlayer coating according to the invention may be water-based, as exemplified in the preparation of an outerlayer coating in the specification on page 7. One skilled in the art would appreciate that when the outerlayer coating is water-based, APTS will react with water from the outerlayer coating to form reaction products. The Examiner's attention is directed to the Declaration of Yaacov Almog attached herewith. In his Declaration Dr. Almog, an experienced polymer chemist, explains the unique, highly reactive properties of APTS and why an art-skilled person such as himself would expect APTS to cause reaction products to occur and would understand the conditions under which this would happen.

Applicants respectfully submit that the reaction product terminology discussed above is inherent in the specification as filed and one skilled in the art would appreciate that the scope of Applicants' invention and how to make and/or use the invention.

Therefore, the requirements of the first and second paragraphs of 35 U.S.C. §112 have been met, and the rejections should be withdrawn.

Claims 1, 3, 7-12, 19-20, 28-29, 32, and 42 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Lever et al., European Patent No. EP 0 458 481 ("Lever"). The Examiner states that Lever discloses a substrate suitable for printing a toner image thereon comprises a sheet of plastic (page 2, lines 23-58), such as polypropylene (BOPP), polyethylene, polyvinylchloride, PET, and polycarbonate, that these plastics are preferably biaxially oriented (page 2, line 48); that Lever also discloses an underlayer coating, the lacquer layer, comprises a polymer material which has crosslinkable functional groups, such as amine and trihydroxy silyl groups (page 3, lines 2-9), and an overlayer coating, the toner image receptive layer, comprises a polymer material to which a toner image can be fused and fixed (page 4, line 42, page 5, line 38); that the polymer material having crosslinkable functional groups including amine, amide, and trihydroxy silyl groups (page 3, lines 2-9) can be one of the reaction products of the amino propyl triethoxy silane; that Lever further discloses that the overlayer is less than 2.5  $\mu\text{m}$  (page 6, lines 5-15), which is within the range recited in claim 42, and that, therefore, Lever meets all the limitations of Claims 1, 3, 7-12, 19-20, 28-29, 32 and 42.

In addition, claims 1-3, 14-18, 22-27, and 42 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Lever.

Applicants respectfully traverse the above rejections under 35 U.S.C. §102(b) or §103(a).

The invention described and claimed herein is a substrate suitable for printing a toner image thereon comprising a sheet of plastics an underlayer coating on the sheet of plastic, and an overlayer coating directly on the undercoating. The underlayer coating comprises a polymer material selected from the group consisting of amine terminated polyamide, amino propyl triethoxy silane, and reaction products of amino propyl triethoxy silane.

Lever discloses a multilayer film suitable for use as a drafting film. The film comprises:

1. a substrate layer of polymeric material;
2. a lacquer layer of polymeric material different from that of the substrate; and
3. a toner-receptive layer containing a copolymer comprising styrene and/or a styrene derivative, and at least one ethylenically unsaturated comonomer copolymerizable therewith, the copolymer containing at least one full functional acid group.

While there are some similarities between the Applicants' invention and the drafting film disclosed by Lever, there are also significant differences, especially with regard to Lever's lacquer layer and Applicants' underlayer coating. More specifically, the Examiner has characterized Lever as teaching a lacquer layer comprising (broadly) "a polymer material which has crosslinkable functional groups, such as amine and triethoxy silyl groups...." However, that characterization is misleading. More correctly, Lever teaches at the top of page three that the lacquer layer comprises suitable resins, including copolymers of acrylic and methacrylic acid and esters thereof that may contain crosslinkable functional groups such as amine or triethoxy silyl groups. While the materials used in Applicants' underlayer coating may contain one or more of the identified crosslinkable functional groups, the materials are *not* based on acrylic or methacrylic acid or esters thereof, as taught by Lever.

Clearly Applicants' invention is not disclosed by Lever and there is no *prima facie* basis for rejecting any of the claims herein under 35 U.S.C. §102(b).

Also, Applicants submit that a close reading of Lever leads to the inescapable conclusion that what Lever teaches is so far from Applicants' invention that Applicants' invention would not be obvious to one skilled in the art in view of Lever.

More specifically, with regard to the rejections under 35 U.S.C. §103(a), the differences between the components taught by Lever for the lacquer layer and the components for Applicants' underlayer coating are so great that one skilled in the art would not be motivated to try the components claimed herein in place of those taught by

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Lever. Thus, Applicants submit that there is no *prima facie* case for obviousness either.

This paper is not intended to raise new issues or require further searching by the Examiner but is meant to either put the claims in allowable condition or reduce issues for appeal. Therefore, entry of this paper is believed proper.

Reconsideration and allowance of all the claims herein are respectfully requested.

Respectfully submitted,



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